

IN THE CLAIMS:

Please cancel claims 4 and 5 without prejudice.

1. (Original) A marking method comprising the steps of:

preparing a marking object;

converging, into the marking object, a laser beam having a wave length range so chosen that the laser beam can transmit through a material forming the marking object, and then effecting a multiple photon absorption; and

moving a converging position of the laser beam, in a manner such that an area, whose refractive index is changed due to the multiple photon absorption, can form a diffraction pattern capable of diffracting a visible light.

2. (Original) A marking method according to claim 1, wherein the diffraction pattern is Bragg diffraction pattern.

3. (Original) A marking method according to claim 1, wherein the step of moving the converging position of the laser beam comprises the steps of:

moving the converging position in a manner such that a first pattern is formed and arranged along a virtual plane;

moving the converging position in a manner such that a second pattern is formed, said second pattern being obtainable by translating the first pattern in a normal direction of the virtual plane.

4. Canceled

5. Canceled

6. (Original) A marking method comprising:

a first step of irradiating a marking object by a pulse laser beam while at the same time changing NA of an objective lens and an energy per pulse, thereby forming a characteristic-changed area by virtue of move of a light converging spot;

a second step of obtaining a relationship among the length of the characteristic-changed area, an NA and an energy per pulse;

a third step of determining the length of a characteristic-changed area to be formed;

a fourth step of determining an NA and an energy per pulse, in accordance with the relationship obtained in the second step, also in accordance with the length of a characteristic-changed area to be formed; and

a fifth step of converging a laser beam on the marking object to form a characteristic-changed area therein, by using the determined NA and the determined energy per pulse.

7. (Original) A marking method according to claim 6, wherein the first step uses a laser beam to conduct an exposure which is continued until the length of a characteristic-

changed area becomes saturated, thereby forming a characteristic-changed area having a saturated length.